

### **DETAILED ACTION**

This Office Action is responsive to application 10/507469, filed 09/10/2004.

Claims 1-36 are presented for examination.

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1-36, drawn to a method of transferring a generated graphical output from a server to a client, classified in class 709, subclass 203.

Group II. Claims 37-96, 108, 123 and 131-133, drawn to a method of processing a streamed media and generating a media presentation, classified in class 709, subclass 231.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as identifying a media stream, generating a media presentation, capturing timing information associated with media stream, which are lacked in subcombination I; and

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subcombination I has separate utility such as retrieving a compressed data format, which is lacked in subcombination II. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the invention require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

During a telephone conversation with Mrs. Kellan Ponikiewicz (Reg. No.: 59,701) on June 30, 2010 a provisional election was made **without traverse** to prosecute the

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invention of Group I, claims 1-36. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 37-96,108,123 and 131-133 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claim 13** (hereafter “*examined claim*”) are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claim 1** (hereafter “*copending claim*”) of copending Application No. **12/108016**. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Copending claim 1 is considered to be broader than examined claim 13. That is, examined claim 13 falls entirely within the scope of copending claim 1.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

<b><u>Examined claim 13</u></b>	<b><u>Copending claim 1</u></b>
A method for generating a graphical display at a client, the method comprising: transmitting output from an application program executing on a server to the client; identifying a bitmap representation within the application output; determining a check value for the bitmap representation; retrieving a compressed data format of	A method for generating a graphical display, the method comprising:  analyzing display output via an output filter, the display output generated by an application executing on a first computing device, and displayed on a display device connected to a second computing device;  <b>identifying, by the output filter,</b>

the bitmap representation using at least in part the check value; and transmitting to the client the compressed data format in place of the bitmap representation.	<b>display data within the display output;</b>  <b>calculating, by the output filter, a value representative of the display data;</b>  searching, by the output filter, a repository for the calculated value; and  <b>retrieving, from the repository, a compressed format data element corresponding to the display data and having an identifier corresponding to the calculated value.</b>
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Examined claim 13 recites the similar limitations in copending claim 1. However, copending claim 1 further recites *analyzing display output and searching a repository for the calculated value* which are not recited in examined claim 13. It would have been obvious to omit it because identifying step includes analyzing step, and retrieving step requires searching step.

**Claims 1-36** (hereafter “*examined claim*”) are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1-34** (hereafter “*patent claim*”) of U.S. Patent No. **7,376,695**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are merely obvious variations of the claims in the patent 7,376,695 as outlined in the table below:

<b><u>Examined claim 1</u></b>	<b><u>Patent claim 1</u></b>
A method for generating a graphical	A method for generating a graphical

display at a client, the method comprising: transmitting output from an application program executing on a server to the client; identifying a non-textual element within the application output; retrieving a compressed data format associated with the non-textual element; and transmitting to the client the compressed data format in place of the non-textual element.	display for a remote terminal session, the method comprising: monitoring output produced by an application program executing on a server; <b>identifying a textual element and a non-textual element of the output;</b> <b>retrieving a compressed data format associated with the non-textual element;</b> and <b>transmitting to the remote terminal session the textual element and the compressed data format in place of the non-textual element.</b>
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Examined claim 1 is merely a broader version of patent claim 1. Examined claim 1 recites the same limitations in patent claim 1. However, patent claim 1 further recites *monitoring output and a textual element* which are not recited in examined claim 1. It would have been obvious to broaden patent claim 1 because it is necessary to monitor the output before to identify something in the output.

Examined claims 4-12 recite the same limitations of patent claims 2-10.

Similar remarks apply to examined claims 13-22 which correspond in functionality to patent claims 11-20.

Similar remarks apply to examined claims 23-33 which correspond in functionality to patent claims 21-31.

Similar remarks apply to examined claim 34 which correspond in functionality to patent claim 32.

Similar remarks apply to examined claim 35 which correspond in functionality to patent claim 33.

Similar remarks apply to examined claim 36 which correspond in functionality to patent claim 34.

### ***Claim Objections***

**Claim 34** is objected to because of the following informalities:

Claims 34 recites "*the compressed data format hi place of the non-textual element*" in the 3<sup>rd</sup> paragraph of the claim should be "the compressed data format in place of the non-textual element". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 9 and 19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 19 recite limitation "*the capability of the client*". There is insufficient antecedent basis for this limitation in the claims.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 23, 25 and 27-32** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 23, 25 and 27-32 recite *a system comprising an output filter module, a server agent, a client agent*. The specification discloses "a server agent 150, an output filter module 155...The server agent module 150 and all modules mentioned throughout the specification are implemented as a software program and/or a hardware device", and "The client agent 175 includes a module, implemented as a software program and/or hardware device" (in paragraphs [0038], [0040]). Thus, these claims are directed to "a system" comprising software per se. Because of this, claims 23, 25 and 27-32 lack the necessary structural elements to be a system. Therefore, the claims fail to fall within one of the four statutory categories of invention recited in 35 U.S.C. § 101 process, machine, manufacture, and composition of matter.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States



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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-2, 8, 11, 23-26, 30 and 33-35** are rejected under 35 U.S.C. 102(e) as being anticipated by Tucker et al. (US 2004/0049598), hereinafter "**Tucker**".

**Claim 1**

**Tucker** teaches a method for generating a graphical display at a client, the method comprising:

transmitting output from an application program executing on a server to the client [*i.e. transmitting a content page from a web server 314 executing on a proxy server 310 to a client 340*] (Tucker, figure 3, paragraphs 0032-0034);

identifying a non-textual element within the application output [*i.e. determining an image tag or a media type within the content page*] (Tucker, paragraphs 0051, 0058); retrieving a compressed data format associated with the non-textual element [*i.e. searching a compressed version of the content which includes a compressed image*] (Tucker, figure 6, paragraphs 0002, 0035-0036, 0038, 0043-0044, 0051); and

transmitting to the client the compressed data format in place of the non-textual element (Tucker, paragraphs 0036, 0043, 0051).

**Claim 2**

**Tucker** teaches the method of claim 1 further comprising:

receiving the compressed data format at the client (Tucker, figures 6 and 13, paragraphs 0036, 0043, 0065); and

generating a display at the client using the compressed data format [*i.e. generating a display by decompressing the compressed data and passing it to browser 1302 for displaying at the client*] (Tucker, figures 13 and 14, paragraphs 0036, 0043, 0065-0066).

### **Claim 8**

**Tucker** teaches the method of claim 1 wherein the non-textual element is a bitmap representation (Tucker, paragraphs 0055, 0058) and wherein the step of transmitting the compressed data format comprises replacing the bitmap representation with the compressed data format [*i.e. compressing the bitmap (BMP) becomes the compressed data version for transmitting to the client*] (Tucker, paragraphs 0035-0036, 0043, 0055, 0058, 0065).

### **Claim 11**

**Tucker** teaches the method of claim 1 wherein the step of identifying further comprises:

intercepting the application output [*i.e. intercepting the content page*]  
(Tucker, paragraphs 0031, 0043); and

inspecting the intercepted output for a bitmap representation of the non-textual element [*i.e. checking the content page which includes the image and the image is decompressed or reconstructed into a bitmap (BMP)*] (Tucker, paragraphs 0031, 0043, 0051, 0055, 0058).

### **Claim 23**

**Tucker** teaches a system for generating a graphical display at a client, the system comprising:

an output filter module [*i.e. control server 642*] configured to intercept output produced by an application program [*i.e. intercepting a content page provided by content server 606*] (Tucker, figure 6, paragraphs 0031-0034, 0043-0044), identify a non-textual element of the output and retrieve a compressed data format associated with the non-textual element [*i.e. determining an image tag or a media type within the content page, and retrieving a compressed version of the content which includes a compressed image*] (Tucker, figure 6, paragraphs 0002, 0035-0036, 0038, 0043-0044, 0051, 0058); and

a server agent [*i.e. proxy server 608*] configured to transmit to the client the compressed data format in place of the non-textual element [*i.e. transmitting*

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*the compressed version of the content page which includes the compressed image]* (Tucker, paragraphs 0036, 0043-0044, 0051).

#### **Claim 24**

**Tucker** teaches the system of claim 23 further comprising a server node [*i.e. Optimal Content Delivery System (OCDS) 600*], the server node including the server agent [*i.e. proxy server 608*] and the output filter module [*i.e. control server 642*] (Tucker, figure 6, paragraphs 0035-0036, 0043-0044).

#### **Claim 25**

**Tucker** teaches the system of claim 23 further comprising:

a client agent [*i.e. proxy client 1306*] configured to receive the compressed data format and to generate a display of the non-textual element using the received compressed data format [*i.e. decompress the compressed data and pass it to the browser for displaying at the client*] (Tucker, figures 13 and 14, paragraphs 0065-0066).

#### **Claim 26**

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**Tucker** teaches the system of claim 25 further comprising a client node [*i.e.* *user PC 340*], the client node including the client agent [*i.e.* *proxy client 1306*] and a display [*i.e.* *computer monitor is inherently from the user personal computer 340*] (Tucker, figure 3, paragraphs 0032, 0065-0066).

### **Claim 30**

**Tucker** teaches the system of claim 23 wherein the non-textual element is a bitmap representation (Tucker, paragraphs 0055, 0058).

### **Claim 34**

**Tucker** teaches a system for generating a graphical display at a client, the system comprising:

a network [*i.e.* *Internet 330*] (Tucker, figure 3);

a server [*i.e.* *Optimal Content Delivery System (OCDS) 600*] in communication with the network, the server including, an output filter module [*i.e.* *control server 642*] configured to intercept output produced by an application program [*i.e.* *intercepting a content page provided by content server 606*] (Tucker, figure 6, paragraphs 0031-0034, 0043-0044), identify a non-textual element of the output and retrieve a compressed data format associated with the

non-textual element [*i.e. determining an image tag or a media type within the content page, and retrieving a compressed version of the content which includes a compressed image*] (Tucker, figure 6, paragraphs 0002, 0035-0036, 0038, 0043-0044, 0051, 0058); and

a server agent [*i.e. proxy server 608*] in communication with the output filter module, the server agent configured to transmit to the client the compressed data format in place of the non-textual element [*i.e. transmitting the compressed version of the content page which includes the compressed image*] (Tucker, paragraphs 0036, 0043-0044, 0051); and

the client [*i.e. user PC 340*] in communication with the network, the client including, a client agent [*i.e. proxy client 1306*] in communication with the server agent, the client agent configured to receive the compressed data format and to generate a display of the non-textual element using the received compressed data format [*i.e. decompress the compressed data and pass it to the browser for displaying at the client*] (Tucker, figures 13 and 14, paragraphs 0065-0066).

**Claim 33** is corresponding system claim of method claim 11. Therefore, it is rejected under the same rationale.

**Claim 35** is corresponding article of manufacture claim of system claim 23. Therefore, it is rejected under the same rationale.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3-4 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tucker** as applied to claim 1 above, and further in view of **Meggers** (US 2002/0162068).

#### **Claim 3**

**Tucker** teaches the method of claim 1 further comprising:

identifying a textual element within the application output [*i.e. a textual element is included in a HTML, so that identifying the textual is inherently from identifying the HTML of the content page or requested information*] (Tucker, figure 13, paragraphs 0047, 0065-0066); and

transmitting to the client a compressed textual element [*i.e. transmitting to the client a compressed HTML*] (Tucker, figure 13, paragraphs 0065-0066).

Tucker fails to teach transmitting the textual element.

However, in an analogous art, **Meggers** teaches transmitting the textual element [*i.e. providing a data block which comprises a text file*] (Meggers, paragraph 0015).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of transmitting the textual element, as disclosed by Meggers, into the teachings of Tucker. One would be motivated to provide an approach consumes significant processing resources (see Meggers, paragraph 0006).

#### **Claim 4**

**Tucker in combination with Meggers** teach the method of claim 3 further comprising:

receiving the compressed data format and the compressed textual element at the client [*i.e. receiving the compressed image and the compressed HTML (e.g. the textual element included in the HTML)*] (Tucker, figure 13, paragraphs 0065-0066); and

generating a display at the client using the compressed data format and the compressed textual element [*i.e. decompressing the compressed image and compressed HTML, then pass them to the browser for displaying at the client*] (Tucker, figures 13 and 14, paragraphs 0065-0066); and



the textual element is received and processed at the client [*i.e. the data block is provided from a server system and processed at a device 106*] (Meggers, paragraph 0015).

### **Claim 12**

**Tucker** teaches the method of claim 1 wherein the step of retrieving further comprises: calculating a first check value for a bitmap representation of the non-textual element [*i.e. calculating a checksum (e.g. CRC) for characters in the URL (e.g. the content page) which hashed in the web server cache 414, and the characters in the content page comprises the identified images (1). Moreover, the identified image is decompressed into a bitmap (BMP) before it being compressed again and stored in the cache. Thus, the BMP is in place of the identified image (2). From (1) and (2), the checksum is calculated for the BMP of the identified image*] (Tucker, paragraphs 0036-0039, 0055, 0058); and searching an image store for the compressed data format of the identified image [*i.e. searching a compressed version of the content which includes a compressed image*] (Tucker, figure 6, paragraphs 0002, 0035-0036, 0038, 0043-0044, 0051).

Tucker fails to teach the compressed data format having a check value identical to the first check value.

However, in an analogous art, **Meggers** teaches the compressed data format having a check value identical to the first check value [*i.e. the encoded (or compressed)*]

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*data block stored in conjunction with a check value which is used as verifying signature of the data originally provided (e.g. the original data block) by the service provider.*

*Thus, the examiner interprets that the verifying signature is used to check or compare the check value of the compressed data and the original data whether they are compromised] (Meggers, paragraphs 0006, 0023-0027).*

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of the compressed data format having a check value which used for verifying, as disclosed by Meggers, into the teachings of Tucker. One would be motivated in order to detect data manipulation by verifying the integrity of the data (see Meggers, paragraph 0006).

**Claims 5-7 and 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tucker** as applied to claims 1 and 23 above, and further in view of **Stock** ("Technologies for Thin Client Architectures").

#### **Claim 5**

**Tucker** teaches the method of claim 1 wherein the compressed data format is transmitted using at least one variety of network protocols (Tucker, paragraph 0044).

Tucker fails to teach presentation layer protocol packet.

However, in an analogous art, **Stock** teaches presentation layer protocol packet (Stock, pages 5, 36, 40-46, 58, 60-61).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of presentation layer protocol packet, as disclosed by Stock, into the teachings of Tucker. One would be motivated to provide a better deliver performance in the content distribution system (see Stock, page 36).

#### **Claim 6**

**Tucker in combination with Stock** teach the method of claim 5 wherein the at least one presentation layer protocol packet is transmitted using a command [*i.e. a command is used from presentation layer to application layer*] for transmitting a file in its native format (Stock, pages 40-46, 60-61).

#### **Claim 7**

**Tucker in combination with Stock** teach the method of claim 5 wherein the at least one presentation layer protocol packet conforms to a remote access protocol [*i.e. Remote Desktop Protocol (RDP)*] (Stock, pages 40, 41, 43-46, 58).

#### **Claim 28**

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**Tucker in combination with Stock** teach the system of claim 27 wherein the server agent is further configured to include a command [*i.e. a command is used from presentation layer to application layer*] in the presentation layer protocol packet for transmitting the compressed data format in place of the non-textual element (Stock, pages 36, 40-46, 58, 60-61).

### **Claim 29**

**Tucker** teaches the system of claim 23 wherein the server agent is further configured to conform to Hypertext Transfer Protocol (HTTP) (Tucker, paragraph 0045).

Tucker fails to teach a thin client protocol.

However, in an analogous art, **Stock** teaches thin client protocol (Stock, pages 31-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of thin client protocol, as disclosed by Stock, into the teachings of Tucker. One would be motivated to “support the abovementioned dynamic GUI updates. Queuing and compressing strategies should be applied in order to reduce server roundtrips and network traffic” (see Stock, page 34).

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**Claim 27** is corresponding system claim of method claim 5. Therefore, it is rejected under the same rationale.

**Claims 9-10 and 31-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tucker** as applied to claims 1 and 23 above, and further in view of Mitzenmacher et al. (5,953,503), hereinafter “**Mitzenmacher**”.

**Claim 9**

**Tucker** teaches the method of claim 1 further comprising the client renders the non-textual element using the compressed data format by decoding or decompressing (Tucker, paragraphs 0065-0066).

Tucker fails to teach determining the capability of the client for rendering.

However, in an analogous art, **Mitzenmacher** teaches determining the capability of the client for rendering [*i.e. checking to see whether the client has an associated dictionary which can be used to decode the compressed page*] (Mitzenmacher, col. 4, lines 47-61).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of determining the capability of the client for rendering, as disclosed by Mitzenmacher, into the teachings of Tucker. One would be motivated to provide “an advantage, the client never has to

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compute the fingerprint..., to prevent its dictionary storage space from being corrupted by malicious senders" (see Mitzenmacher, col. 4, line 62-col. 5, line 2).

### **Claim 10**

**Tucker in combination with Mitzenmacher** teach the method of claim 9 further comprising, upon determination that the client cannot render the non-textual element using the compressed data format, transmitting an image-rendering library [*i.e. a dictionary*] capable of rendering the non-textual element using the compressed data format (Mitzenmacher, col. 4, lines 47-61).

**Claims 31-32** are corresponding system claims of method claims 9-10. Therefore, they are rejected under the same rationale.

**Claims 13, 21-22 and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker et al. (US 2004/0049598), hereinafter "**Tucker**" and in view of **Meggers** (US 2002/0162068).

### **Claim 13**

**Tucker** teaches a method for generating a graphical display at a client, the method comprising:

transmitting output from an application program executing on a server to the client [*i.e. transmitting a content page from a web server 314 executing on a proxy server 310 to a client 340*] (Tucker, figure 3, paragraphs 0032-0034);

identifying a bitmap representation within the application output [*i.e. identifying an image type within the content page such as a BMP (bitmap), JPEG, GIF, etc.*] (Tucker, paragraphs 0051, 0055, 0058);

determining a check value for the bitmap representation [*i.e. calculating a checksum (e.g. CRC) for characters in the URL (e.g. the content page) which hashed in the web server cache 414, and the characters in the content page comprises the identified BMP, etc.. Therefore, the checksum is calculated for the BMP*] (Tucker, paragraphs 0036-0039, 0055, 0058);

retrieving a compressed data format of the bitmap representation [*i.e. retrieving a compressed version of the content which includes a compressed BMP*] (Tucker, figure 6, paragraphs 0002, 0035-0036, 0038, 0043-0044, 0051);  
and

transmitting to the client the compressed data format in place of the bitmap representation (Tucker, paragraphs 0036, 0043-0044, 0051, 0055, 0058).

Tucker fails to teach using at least in part the check value for the compressed data format.

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However, in an analogous art, **Meggers** teaches using at least in part the check value for the compressed data format [*i.e. the encoded (or compressed) data block stored in conjunction with a check value which is used as verifying signature of the data originally provided (e.g. the original data block) by the service provider*] (Meggers, paragraphs 0006, 0023-0027).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of using the check value for the compressed data format, as disclosed by Meggers, into the teachings of Tucker. One would be motivated in order to detect data manipulation by verifying the integrity of the data (see Meggers, paragraph 0006).

### **Claim 21**

**Tucker in combination with Meggers** teach the method of claim 13 wherein the step of identifying further comprises:

intercepting the application output [*i.e. intercepting the content page*]  
(Tucker, paragraphs 0031, 0043); and

inspecting the intercepted output for a bitmap representation of the non-textual element [*i.e. checking the content page which includes the image and the image is decompressed or reconstructed into a bitmap (BMP)*] (Tucker, paragraphs 0031, 0043, 0051, 0055, 0058).



**Claim 22**

**Tucker in combination with Meggers** teach the method of claim 13 wherein the step of determining further comprises:

calculating a CRC based on the bitmap representation [*i.e. calculating a CRC (e.g. checksum) for characters in the URL (e.g. the content page) which hashed in the web server cache 414, and the characters in the content page comprises the identified images (1). Moreover, the identified image is decompressed into a bitmap (BMP) before it being compressed again and stored in the cache. Thus, the BMP is in place of the identified image (2). From (1) and (2), the CRC is calculated for the BMP of the identified image*] (Tucker, paragraphs 0036-0039, 0055, 0058);

and using the calculated CRC as the check value [*i.e. using the check value as CRC for verifying signature of the data originally provided (e.g. the original data block) by the service provider*] (Meggers, paragraphs 0006, 0023-0027).

**Claim 36** is corresponding article of manufacture claim of method claim 13. Therefore, it is rejected under the same rationale.

**Claims 14-15 and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tucker and Meggers** as applied to claim 13 above, and further in view of Mitzenmacher et al. (5,953,503), hereinafter “**Mitzenmacher**”.

**Claim 14**

**Tucker and Meggers** teach the method of claim 13 further comprising:

identifying the bitmap representation within the application output [*i.e.*  
*identifying an image type within the content page such as a BMP (bitmap),  
JPEG, GIF, etc.*] (Tucker, paragraphs 0051, 0055, 0058); and

transmitting to the client the compressed data format (Tucker, paragraphs 0036, 0043-0044, 0051, 0055, 0058).

Tucker and Meggers fail to teach a command associated with the representation, and transmitting the command along with the compressed data.

However, in an analogous art, **Mitzenmacher** teaches transmitting a command [*i.e.* a fingerprint (FP1)], associated with dictionary for decompressing, along with the compressed data (Mitzenmacher, col. 4, lines 21-61).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of transmitting the command along with the compressed data format, as disclosed by Mitzenmacher, into the teachings of Tucker and Meggers. One would be motivated to provide “an advantage, the client never has to compute the fingerprint..., to prevent its dictionary

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storage space from being corrupted by malicious senders" (see Mitzenmacher, col. 4, line 62-col. 5, line 2).

### **Claim 15**

**Tucker and Meggers in combination with Mitzenmacher** teach the method of claim 14 further comprising:

receiving the compressed data format [*i.e. the compressed page P1*] and the command [*i.e. the fingerprint (FP1)*] at the client (Mitzenmacher, col. 4, lines 47-61); and generating the decompressed page using the command (Mitzenmacher, col. 4, lines 47-61).

decompressing the compressed data format to generate the bitmap representation [*i.e. decompressing the compressed data and pass it to the browser for displaying the bitmap or image at the client*] (Tucker, paragraphs 0055, 0065-0067); and

generating a display using the bitmap representation (Tucker, paragraphs 0065-0067).

### **Claim 19**

**Tucker and Meggers** teach the method of claim 13 former comprising the client renders the bitmap representation using the compressed data format by decoding or decompressing (Tucker, paragraphs 0065-0067).

Tucker and Meggers fail to teach determining the capability of the client for rendering.

However, in an analogous art, **Mitzenmacher** teaches determining the capability of the client for rendering [*i.e. checking to see whether the client has an associated dictionary which can be used to decode the compressed page*] (Mitzenmacher, col. 4, lines 47-61).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of determining the capability of the client for rendering, as disclosed by Mitzenmacher, into the teachings of Tucker and Meggers. One would be motivated to provide "an advantage, the client never has to compute the fingerprint..., to prevent its dictionary storage space from being corrupted by malicious senders" (see Mitzenmacher, col. 4, line 62-col. 5, line 2).

## **Claim 20**

**Tucker and Meggers in combination with Mitzenmacher** teach the method of claim 19 further comprising, upon determination that the client cannot render the page using the compressed data format, transmitting an image-rendering library [*i.e. a*

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*dictionary*] capable of rendering the page using the compressed data format (Mitzenmacher, col. 4, lines 47-61); and the bitmap representation (Tucker, paragraphs 0065-0067).

**Claims 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tucker and Meggers** as applied to claim 13 above, and further in view of **Stock** ("Technologies for Thin Client Architectures") and in view of Mitzenmacher et al. (5,953,503), hereinafter "**Mitzenmacher**".

**Claim 16**

**Tucker and Meggers** teach the method of claim 13 wherein the compressed data format of the bitmap representation is transmitted using at least one variety of network protocols (Tucker, figure 13, paragraphs 0043-0044, 0051, 0055, 0058, 0065-0066).

Tucker and Meggers fail to teach a command associated with displaying the representation, and presentation layer protocol packet.

However, in an analogous art, **Mitzenmacher** teaches a command [*i.e. a fingerprint (FP1)*] associated with decompressing the compressed page (Mitzenmacher, col. 4, lines 21-61) and, **Stock** teaches presentation layer protocol packet (Stock, pages 5, 36, 40-46, 58, 60-61).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of presentation layer protocol packet, as disclosed by Stock, with Mitzenmacher's feature of the command, into the teachings of Tucker and Meggers. One would be motivated to provide a better deliver performance (see Stock, page 36), and "an advantage, the client never has to compute the fingerprint..., to prevent its dictionary storage space from being corrupted by malicious senders" (see Mitzenmacher, col. 4, line 62-col. 5, line 2).

#### **Claim 17**

**Tucker and Meggers in combination with Stock and Mitzenmacher** teach the method of claim 16 wherein the presentation layer protocol packet is transmitted using a protocol command [*i.e. a command is used from presentation layer to application layer*] established for transmitting a file in its compressed data format (Stock, pages 40-46, 60-61).

#### **Claim 18**

**Tucker and Meggers in combination with Stock and Mitzenmacher** teach the method of claim 16 wherein the presentation layer protocol packet is conformed to a presentation protocol [*i.e. Remote Desktop Protocol (RDP) is a presentation protocol*] (Stock, pages 40, 41, 43-46, 58).

### ***Conclusion***

The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure:

1. Robotham et al., U.S. Patent No. 6,704,024 disclosed visual content browsing using rasterized representations.
2. Ben-Yehezkel, U.S. PG-Pub. 2003/0004933 disclosed compound request processing.
3. Oh et al., U.S. Patent No. 7,103,105 disclosed data transmission protocol for image communication apparatus.
4. Rodriguez et al., U.S. Patent No. 6,427,149 disclosed remote access of archived compressed data files.

### ***Correspondence Information***

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVEK SRIVASTAVA can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Examiner, Art Unit 2445